Chapter: 17

State(s): Idaho

Recovery Unit Name: Salmon River

Region 1
U.S. Fish and Wildlife Service
Portland, Oregon

DISCLAIMER

Recovery plans delineate reasonable actions that are believed necessary to recover and/or protect the species. Recovery plans are prepared by the U.S. Fish and Wildlife Service and, in this case, with the assistance of recovery unit teams, State and Tribal agencies, and others. Objectives will be attained and any necessary funds made available subject to budgetary and other constraints affecting the parties involved, as well as the need to address other priorities. Recovery plans do not necessarily represent the views nor the official positions or approval of any individuals or agencies involved in the recovery plan formulation, other than the U.S. Fish and Wildlife Service. Recovery plans represent the official position of the U.S. Fish and Wildlife Service *only* after they have been signed by the Director or Regional Director as *approved*. Approved recovery plans are subject to modification as dictated by new findings, changes in species status, and the completion of recovery tasks.

Literature Citation: U.S. Fish and Wildlife Service. 2002. Chapter 17, Salmon River Recovery Unit, Idaho. 194 p. *In*: U.S. Fish and Wildlife Service. Bull Trout (*Salvelinus confluentus*) Draft Recovery Plan. Portland, Oregon.

ACKNOWLEDGMENTS

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In the Salmon River Recovery Unit, the Upper and Lower recovery unit teams were established in 2000. However, those teams have not met since then because of limited staff and resources. Individuals on those original teams have assisted with the preparation of this chapter. The U.S. Fish and Wildlife Service plans to reconvene those teams to assist with the preparation of the final Salmon River Recovery Unit Chapter. The following people were contacted for their input to the contents of this recovery unit chapter during 2001. In July 2000, the many individuals listed below met to discuss the contents of the recovery unit chapter:

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SALMON RIVER RECOVERY UNIT CHAPTER OF THE BULL TROUT RECOVERY PLAN

EXECUTIVE SUMMARY

CURRENT SPECIES STATUS

The Salmon River Recovery Unit encompasses the entire Salmon River basin, an area of 36,278 square kilometers (14,000 square miles) which includes 28,730 kilometers (17,000 miles) of streams. Bull trout are well distributed throughout most of the unit in 125 identified local populations located within 10 core areas. This recovery unit is unique in that most of the core areas are connected by the Mainstem Salmon River or its tributaries. Major dams that otherwise may isolate core areas from each other are lacking. Fluvial and adfluvial populations are present in all core areas; however, threats limit the number of local populations with these migratory fish. Seasonal barriers for migration exist in the mainstem rivers and tributaries from a variety of different factors including water withdrawals and landscape-level changes that alter water flow. Many small populations of bull trout are isolated by seasonal barriers and these remaining bull trout populations are depressed. Populations in the Lemhi River such as Bohannon Creek are examples of these isolated populations. Other populations of bull trout that are not isolated may contain healthier populations of bull trout. These populations are located in the East Fork of the South Fork of the Salmon River and the Middle Fork Salmon River.

HABITAT REQUIREMENTS AND LIMITING FACTORS

A detailed discussion of bull trout biology and habitat requirements is provided in Chapter 1 of this recovery plan. The limiting factors discussed here are specific to The Salmon River Recovery Unit. Dramatic changes have occurred in riparian, wetland, stream, and forest ecosystems mostly outside wilderness areas in the recovery unit. These changes have resulted from several suppressing factors that include livestock grazing, logging, roads, mining, introduction and management for exotic species, and irrigation withdrawals. In many instances, habitat degradation and consequent reduction in bull trout populations outside of wilderness areas have

resulted in cumulative effects of change to terrestrial and aquatic ecosystems. Where reasons for decline of bull trout were identified in this chapter, it was done to establish a baseline so habitat restoration and recovery criteria can be achieved.

RECOVERY GOALS AND OBJECTIVES

The goal of the bull trout recovery plan is to **ensure the long-term persistence of self-sustaining, complex interacting groups of bull trout distributed across the species native range, so that the species can be delisted**. To achieve this goal the following objectives have been identified for bull trout in the Salmon River Idaho Recovery Unit:

- Maintain the current distribution of bull trout and restore the distribution in previously occupied areas within the Salmon River Recovery Unit.

- Maintain stable or increasing trends in abundance of bull trout.

- Restore and maintain suitable habitat conditions for all bull trout life history stages and strategies.

- Conserve genetic diversity and provide opportunity for genetic exchange.

RECOVERY CRITERIA

The goal for recovery of bull trout in this Salmon River Idaho Recovery Unit is to ensure the long-term persistence of self-sustaining, complex interacting groups of bull trout distributed throughout the Salmon River Idaho Recovery Unit such that the species can be delisted. To achieve this goal the following objectives have been identified for bull trout in the Salmon River Idaho Recovery Unit:

1. **Maintain the distribution of bull trout in the 125 identified local populations, and restore distribution in 8 important potential local populations in 10 of the core areas within the Salmon River Recovery Unit.** Potential local populations that are important for the recovery of bull trout were identified by biologists and the recovery unit teams as follows:

Kinnikinic, Withington, Sandy, Agency, Hazard, Elkhorn, Upper Johnson and French Creeks. These 8 populations contain core habitat or it is estimated based on professional judgement of local biologists, that the streams could contain core habitat when restored. These streams are located in core areas where recommendations call for more widespread distribution of local populations to allow for long term persistence. The remaining potential local populations where information is currently lacking on their ability to contribute to recovery include: Crooked, Camp/Phoebe, Bear, Porphyry, Sheep/South Fork Salmon River. These five potential local populations will be evaluated within five years to determine if core habitat is present and if the areas are needed for the recovery of bull trout.

2. **Estimated recovered abundance of adult bull trout in the Salmon River Recovery Unit is between 100 and 5,000 individuals in each of the 10 core areas, a total of 28,300.** The range of recovered abundance was derived using the best professional judgement of the Upper Salmon River and Lower Salmon River Recovery Unit teams (USFWS, *in litt.*, 2000a; and USFWS, *in litt*., 2000b, USFWS, *in litt*., 2002). The professional judgement of biologists is based on the estimated productive capacity of identified local populations and core area populations, on consideration of current habitat conditions and potential habitat conditions after threats have been addressed. Work is underway to develop a monitoring and evaluation approach or plan in an adaptive management context, that will provide feedback and a low periodic re-assessment of current recovery targets for bull trout abundance in this recovery unit (USFWS, *in litt.*, 2001b).

3. **For bull trout in the Salmon River Recovery Unit, trend criteria will be met when the overall bull trout population trend is accepted as stable in three core areas and increasing in five core areas, based on at least 15 years of monitoring data. Two core areas need additional information before trend criteria can be established. Where monitoring data does not currently exist, additional monitoring data may be needed.** The Upper Salmon River, Pahsimeroi River, Lemhi River, Middle Salmon River-Panther, South Fork Salmon River, and Little-Lower Salmon River core areas with the greatest amount of threats would need increasing trends. The

core areas that have fewer threats would need to maintain stable trends include the Middle Fork Salmon River and Middle Salmon River-Chamberlain. Insufficient data is available to establish trend criteria for the small populations in Lake Creek and Opal Lake core areas. For these two core areas, trends should remain stable until population monitoring and investigations of threats are completed within 5 years. At that time, the trend would be established based on new populations status information.

4. **Restore connectivity in specific streams by eliminating barriers that inhibit recovery.** To achieve this criterion, eliminate barriers within specific streams listed in Appendix B. It is not possible to identify any specific barrier (including barriers due to physical obstructions, unsuitable habitat, and water quality) on the streams in Appendix B at this time because collectively the small barriers inhibit connectivity for bull trout. Not any one specific barrier has been identified as the cause for this lack of connectivity in these streams. These specific streams will be reconnected to the mainstem rivers or other streams that allow for the migratory bull trout life history form to persist in the Pahsimeroi River, Lemhi River, Upper Salmon River, and Middle Salmon River-Panther core areas.

Based on the best scientific information available, the teams have identified recovery criteria and actions necessary for recovery of bull trout within the recovery unit. However, the recovery unit teams recognize that uncertainties exist regarding bull trout population abundance, distribution, and actions needed. The recovery teams feel that if effective management and recovery are to occur, the recovery plan for the Salmon River must be viewed as a "living" document, which will be updated as new information becomes available. As a part of adaptive management, the recovery teams will identify triggers or thresholds that will indicate when the recovery criteria need to be reviewed. In addition, the recovery unit team has identified research within the recovery unit that needs to be addressed to ensure recovery criteria are met. Research on bull trout population status is very important in this recovery unit because only a limited amount of information is available. For example, only in very few selected areas in the recovery unit are repeated bull trout redd counts being conducted on the vast amount of federally managed habitat that contain bull trout populations.

ACTIONS NEEDED

Recovery for bull trout will entail reducing threats to the long-term persistence of local populations and their habitat, ensuring the security of multiple interacting groups of bull trout, and providing access to habitat conditions that allows for the expression of various life history forms. The seven categories are listed in Chapter 1; tasks specific to this recovery unit are provided in this chapter.

ESTIMATED COST OF RECOVERY

Total cost of bull trout recovery in the Salmon River Recovery Unit is estimated at about $60 million over a 25-year recovery time-frame, or about $2.4 million per year. If the timeframe for recovery can be reduced, lower estimated costs would occur. Total costs include all funds expended, both public and private, and incorporate estimates of expenditures by local and State governments as well as Federal and private funds. These costs are attributed to bull trout conservation, but other aquatic species will also benefit. Costs were not included for activities that are part of Federal, State, or private operating obligations. Successful recovery of bull trout in the Salmon River Recovery Unit will represent, in large measure, the restoration of high quality coldwater fish habitat in areas that this does not already exist in central Idaho and will assist existing programs for restoration of anadromous fish in the basin.

ESTIMATED DATE OF RECOVERY

Time required to achieve recovery depends on bull trout status, factors affecting bull trout, implementation and effectiveness of recovery tasks, and responses to recovery tasks. A tremendous amount of work will be required to restore impaired habitat, reconnect habitat, and eliminate threats from nonnative species. Three to five bull trout generations (15 to 25 years), or possibly longer, may be necessary before identified threats to the species can be significantly reduced and bull trout can be considered eligible for delisting.